

**Amendments to the Claims:**

Claims 2-4, 9, and 10 have been amended herein. Please note that all claims currently pending and under consideration in the above-referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Original) A composite medium, comprising:  
at least one trialkyl methylammonium compound homogenously dispersed in a polyacrylonitrile matrix.
2. (Currently amended) The composite medium of claim 1, wherein the at least one trialkyl methylammonium compound comprises at least one of trialkyl methylammonium nitrate ~~or~~ and trialkyl methylammonium chloride.
3. (Currently amended) The composite medium of claim 1, wherein the at least one trialkyl methylammonium compound is present in the composite medium at from approximately 5% by weight to approximately 30% by weight of a total weight of the composite medium.
4. (Currently amended) The composite medium of claim 1, wherein the polyacrylonitrile ~~of the~~ matrix is present in the composite medium at from approximately 70% by weight to approximately 95% by weight of a total weight of the composite medium.
5. (Original) The composite medium of claim 1, wherein the at least one trialkyl methylammonium compound homogenously dispersed in the polyacrylonitrile matrix comprises homogenous, substantially spherical particles.

6. (Original) The composite medium of claim 1, further comprising a substrate at least partially impregnated with the at least one trialkyl methylammonium compound homogenously dispersed in the polyacrylonitrile matrix.

7. (Original) The composite medium of claim 6, wherein the substrate comprises glass fiber, paper, or polytetrafluoroethylene.

8. (Previously presented) A method of forming a composite medium, comprising:  
dissolving polyacrylonitrile in a solvent to form a matrix solution;  
combining at least one trialkyl methylammonium compound with the matrix solution to form a homogenous, composite medium solution;  
diluting the solvent of the matrix solution; and  
solidifying the homogenous, composite medium solution.

9. (Currently amended) The method of claim 8, wherein dissolving polyacrylonitrile in a solvent to form a matrix solution comprises dissolving from approximately 2% by weight to approximately 5% by weight of polyacrylonitrile in the solvent.

10. (Currently amended) The method of claim 8, wherein combining at least one trialkyl methylammonium compound with the matrix solution to form a homogenous, composite medium solution comprises combining at least one of trialkyl methylammonium nitrate ~~or~~ and trialkyl methylammonium chloride in the matrix solution.

11. (Original) The method of claim 8, wherein combining at least one trialkyl methylammonium compound with the matrix solution to form a homogenous, composite medium solution comprises combining from approximately 5% by weight to approximately 30% by weight of the trialkyl methylammonium compound in the matrix solution.

12. (Previously presented) The method of claim 8, wherein diluting the solvent of the matrix solution comprises depositing portions of the composite medium solution into a water bath.

13. (Original) The method of claim 12, wherein solidifying the homogenous, composite medium solution comprises forming homogenous, substantially spherical beads from the portions of the composite medium solution.

14. (Original) The method of claim 8, further comprising impregnating the homogenous, composite medium solution into a substrate.

15. (Original) The method of claim 14, wherein impregnating the homogenous, composite medium solution into a substrate comprises impregnating the homogenous, composite medium solution into a glass fiber, paper, or polytetrafluoroethylene substrate.

16. (Previously presented) The method of claim 14, wherein diluting the solvent of the matrix solution comprises depositing the substrate into a water bath.

17. (Original) The method of claim 8, wherein solidifying the homogenous composite medium solution comprises entrapping the at least one at least one trialkyl methylammonium compound in the polyacrylonitrile.

Claims 18-25 (Canceled)